

What is claimed is:

1. A method for transmitting/receiving data of an encoder, the data detected by the encoder being transmitted/received in predetermined cycles, the method comprising the steps of:

5       dividing positional data;  
          outputting the divided positional data with deviation data output each time; and  
          reconstituting the divided positional data.

2. The method for transmitting/receiving data of an  
10   encoder according to claim 1, wherein  
          the reconstituted positional data is collated with a position calculated from the deviation data.

3. A method for transmitting data of an encoder, the data detected by the encoder being transmitted in predetermined  
15   cycles, the method comprising the steps of:  
          dividing positional data; and  
          outputting the divided positional data with deviation data output each time.

4. A method for receiving data of an encoder, divided  
20   positional data transmitted from the encoder being received with deviation data output each time, the method comprising the step of:

          reconstituting the divided positional data.

5. The method for receiving data of an encoder according  
25   to claim 4, wherein

the reconstituted positional data is collated with a position calculated from the deviation data.

6. A data transmitting/receiving device for an encoder, for transmitting/receiving data detected by the encoder in  
5 predetermined cycles, the device comprising:

means for dividing positional data;

means for outputting the divided positional data with deviation data output each time; and

means for reconstituting the divided positional data.

10 7. The data transmitting/receiving device for an encoder according to claim 6, comprising means for collating the reconstituted positional data with a position calculated from the deviation data.

8. A data transmitting device for an encoder, for  
15 transmitting data detected by the encoder in predetermined cycles, the device comprising:

means for dividing positional data; and

means for outputting the divided positional data with deviation data output each time.

20 9. A data receiving device for an encoder, for receiving divided positional data transmitted from a data transmitting device with deviation data output each time, the device comprising:

means for reconstituting the divided positional data.

25 10. The data receiving device for an encoder according to

claim 9, comprising means for collating the reconstituted positional data with a position calculated from the deviation data.

11. A method for transmitting/receiving data of an encoder, the data detected by the encoder being regularly transmitted/received whereas the data is irregularly transmitted/received at the generation of a trigger signal, the method comprising the steps of:

outputting a trigger generation status, positional data at each predetermined time interval, and trigger generation data corresponding to deviation data from the positional data as the regularly transmitted/received data; and

synthesizing the positional data at the generation of a trigger using the positional data and the deviation data.

12. A method for transmitting data of an encoder, the data detected by the encoder being regularly transmitted whereas the data is irregularly transmitted at the generation of a trigger signal, the method comprising the step of:

outputting a trigger generation status, positional data at each predetermined time interval, and trigger generation data corresponding to deviation data from the positional data as the regularly transmitted data.

13. A method for receiving data of an encoder, in which a trigger generation status, positional data at each

predetermined time interval, and trigger generation data

corresponding to deviation data from the positional data regularly transmitted from the encoder are received, the method comprising the step of:

synthesizing the positional data at the generation of a  
5 trigger using the positional data and the deviation data.

14. A data transmitting/receiving device for an encoder, for regularly transmitting/receiving the data detected by the encoder while irregularly transmitting/receiving the data at the generation of a trigger signal, the device comprising:

10 means for outputting a trigger generation status, positional data at each predetermined time interval, and trigger generation data corresponding to deviation data from the positional data as the regularly transmitted/received data; and

15 means for synthesizing the positional data at the generation of a trigger using the positional data and the deviation data.

15. A data transmitting device for an encoder, for regularly transmitting data detected by the encoder while  
20 irregularly transmitting the data at the generation of a trigger signal, the device comprising means for outputting a trigger generation status, positional data at each predetermined time interval, and trigger generation data corresponding to deviation data from the positional data as  
25 the regularly transmitted data.

16. A data receiving device for an encoder, for regularly receiving a trigger generation status, positional data at each predetermined time interval, and trigger generation data corresponding to deviation data from the positional data  
5 regularly transmitted from a data transmitting device, the receiving device comprising means for synthesizing the positional data at the generation of a trigger using the positional data and the deviation data.

17. A method for transmitting/receiving data of an  
10 encoder, the data detected by the encoder being regularly transmitted/received while the data is irregularly transmitted/received at the generation of a trigger signal, the method comprising the step of transmitting/receiving positional data at the generation of the trigger signal  
15 independently of the regularly transmitted/received data.

18. A data transmitting/receiving device for an encoder, for regularly transmitting/receiving data detected by the encoder while irregularly transmitting/receiving the data at the generation of a trigger signal, the device comprising:  
20 means for transmitting/receiving the regularly transmitted/received data; and

means for transmitting/receiving positional data at the generation of the trigger signal independently of the means.

19. A measuring method comprising the step of  
25 transmitting/receiving data detected by an encoder by the

method for transmitting/receiving data according to claim 11 or 17.

20. A measuring device comprising the data transmitting/receiving device according to claim 14 or 18.